Complete Summary

TITLE

Adolescent immunization status: percentage of enrolled adolescents who had a second dose of measles-mumps-rubella (MMR), three hepatitis B vaccinations, and one chicken pox vaccination (VZV) by their 13th birthday (combination #2).

SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS 2006. Health plan employer data & information set. Vol. 2, Technical specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2005. 350 p.

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the Measure Validity page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of enrolled adolescents who turned 13 years of age during the measurement year, who were continuously enrolled for 12 months prior to the member's 13th birthday and who had a second dose of measles-mumps-rubella (MMR), three hepatitis B vaccinations, and one chicken pox vaccination (VZV) by their 13th birthday.

Note from the National Quality Measures Clearinghouse (NQMC): For this measure, there is both Administrative and Hybrid specifications. This NQMC measure summary is based on the Administrative Specification. Refer to the original measure documentation for details pertaining to the Hybrid Specification.

RATIONALE

Generally, immunization programs have not focused on improving vaccination coverage among adolescents. There is consensus among advisory groups regarding the importance and timing of immunizations affecting the adolescent population. The Advisory Committee on Immunization Practices (ACIP) adopted recommendations for adolescent immunization which include routine immunization of adolescents not previously vaccinated with hepatitis B and the second dose of MMR (measles-mumps-rubella), giving an early booster dose of tetanus and diphtheria toxoids, and provision of other vaccines when indicated. For example, the ACIP recommendations are consistent with those of the American Academy of Pediatrics, the American Medical Association, the National Medical Association and the American Academy of Family Physicians.

PRIMARY CLINICAL COMPONENT

Immunization; measles; mumps; rubella; hepatitis B; varicella zoster virus (chicken pox)

DENOMINATOR DESCRIPTION

Enrolled adolescents who turn 13 years of age during the measurement year (see the "Description of Case Finding" field in the Complete Summary)

NUMERATOR DESCRIPTION

Adolescents who received the second measles-mumps-rubella (MMR) vaccination, three hepatitis B vaccinations, and at least one chicken pox vaccination (VZV) (combination #2) (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Use of this measure to improve performance

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Immunization of adolescents. Recommendations of the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, the American

Academy of Family Physicians, and the American Medical Association. MMWR Recomm Rep1996 Nov 22;45(RR-13):1-16. PubMed

National Committee for Quality Assurance (NCQA). The state of health care quality 2005: industry trends and analysis. Washington (DC): National Committee for Quality Assurance (NCQA); 2005.

Rationale and recommendations: infectious diseases. In: American Medical Association. Elster AB, Kuznets NJ, editor(s). AMA guidelines for adolescent preventive services: recommendations and rationale. Chicago (IL): American Medical Association; 1994. p. 165-71.

Recommendations for preventive pediatric health care. Committee on Practice and Ambulatory Medicine. Pediatrics1995 Aug;96(2 Pt 1):373-4. PubMed

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Accreditation
Decision-making by businesses about health-plan purchasing
Decision-making by consumers about health plan/provider choice
External oversight/Medicaid
External oversight/State government program
Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Managed Care Plans

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

TARGET POPULATION AGE

Members who turned 13 years of age during the measurement year

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

See "Burden of Illness" field.

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Currently there are about 1.25 million people who have life-long hepatitis B virus infection. Each year about 4,000-5,000 of these people die from related liver disease, resulting in over $700 million of medical and work-loss costs. Approximately 25% of children who become infected with life-long hepatitis B virus would be expected to die of related liver disease as adults.

If vaccination for chicken pox were to stop, the disease would quickly return to its previous high rate of infection, and every child would miss a week of school, every parent a week of work, and 50-100 varicella-related deaths would occur each year, most of them in previously healthy children and adults.

The expected measles morbidity among a birth cohort of 4.1 million without vaccination against measles would be 3.7 million cases, over 350,000 complications, and 1,859 deaths, with total direct and indirect costs of $2.2 billion and $1.6 billion, respectively.

EVIDENCE FOR BURDEN OF ILLNESS

Centers for Disease Control and Prevention (CDC). National Immunization Program. What would happen if we stopped vaccinations?. [fact sheet online]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2003 Aug 27[8 p].

Hatziandreu EJ, Brown RE, Halpern MT. A cost benefit analysis of the measles mumps rubella (MMR) vaccine. Final report prepared for National Immunization Program, Centers for Disease Control and Prevention. Arlington (VA): Center for Public Health Research and Evaluation, Battelle Memorial Institute; 1994.

UTILIZATION

Unspecified

COSTS

Vaccine-preventable diseases have a costly impact, resulting in doctors visits, hospitalizations, and premature deaths. Sick children can also cause parents to lose time from work. Currently there are about 1.25 million people who have life-long hepatitis B virus infection. Each year about 4,000-5,000 of these people die from related liver disease, resulting in over $700 million of medical and work-loss costs. In 1990 in the United States (U.S.), the cost of caring for children who contracted chicken pox was estimated as $918 million annually.

EVIDENCE FOR COSTS

Centers for Disease Control and Prevention (CDC). National Immunization Program. What would happen if we stopped vaccinations?. [fact sheet online]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2003 Aug 27[8 p].

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness

Data Collection for the Measure

CASE FINDING

Both users and nonusers of care

DESCRIPTION OF CASE FINDING

Enrolled adolescents who turn 13 years of age during the measurement year and who were continuously enrolled for 12 months prior to the member's 13th birthday with no more than one gap in enrollment of up to 45 days (commercial) or not more than a one-month gap in Coverage (Medicaid) during the continuous enrollment period

DENOMINATOR SAMPLING FRAME

Enrollees or beneficiaries

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions
Enrolled adolescents who turn 13 years of age during the measurement year

Exclusions
Adolescents who had a contraindication for a specific vaccine may be excluded from the denominator. A managed care organization (MCO) that excludes contraindicated adolescents may do so only for adolescents where the administrative data do not indicate that the contraindicated immunization was rendered. The exclusion must have occurred by the 13th birthday.

The MCO should look for exclusions as far back as possible in the member's history and may use the contraindications and codes in Table AIS-B in the original measure documentation to identify exclusions.

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Patient Characteristic

DENOMINATOR TIME WINDOW

Time window precedes index event

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions
Adolescents who received the second measles-mumps-rubella (MMR) vaccination, three hepatitis B vaccinations, and at least one chicken pox vaccination (VZV)

For all antigens, the managed care organization (MCO) may count any of the following:

- evidence of the antigen or combination vaccine, or
- documented history of the illness, or
- a seropositive test result.

For combination vaccinations that require more than one antigen (i.e., MMR), the MCO must find evidence of all of the antigens.

MMR: A second dose of MMR by the member's 13th birthday. To be compliant, a member must have received either:

- one MMR on or between the 4th and 13th birthdays, or
- two MMRs on or between the 1st and 4th birthdays.

Hepatitis B: Three hepatitis B vaccinations with different dates of service on or before the member's 13th birthday. The MCO may count a member compliant if the member received the complete two-dose hepatitis B regimen identified by Current Procedure Terminology (CPT) code 90743. Members are also compliant if they receive one dose of the two-dose regimen (90743) and two other doses of hepatitis B.

VZV: One chicken pox vaccination (VZV) by the member's 13th birthday.

Exclusions
Unspecified

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Analysis by subgroup (stratification on patient factors, geographic factors, etc.)

DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

This measure requires that separate rates be reported for Medicaid and commercial product lines.

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends
Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Adolescent immunization status (AIS).

MEASURE COLLECTION

HEDIS® 2006: Health Plan Employer Data and Information Set

MEASURE SET NAME

Effectiveness of Care

DEVELOPER

National Committee for Quality Assurance

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

1997 Jan

REVISION DATE

2005 Jan

MEASURE STATUS

This is the current release of the measure.

This measure updates a previous version: National Committee for Quality Assurance (NCQA). HEDIS 2004. Health plan employer data & information set. Vol. 2, Technical specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2003. 374 p.

SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS 2006. Health plan employer data & information set. Vol. 2, Technical specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2005. 350 p.

MEASURE AVAILABILITY

The individual measure, "Adolescent Immunization Status (AIS)," is published in "HEDIS 2006. Health Plan Employer Data & Information Set. Vol. 2, Technical Specifications."

For more information, contact the National Committee for Quality Assurance (NCQA) at 2000 L Street, N.W., Suite 500, Washington, DC 20036; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org.

COMPANION DOCUMENTS

The following is available:

- National Committee for Quality Assurance (NCQA). The state of health care quality 2005: industry trends and analysis. Washington (DC): National Committee for Quality Assurance (NCQA); 2005. 74 p.

For more information, contact the National Committee for Quality Assurance (NCQA) at 2000 L Street, N.W., Suite 500, Washington, DC 20036; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org.

NQMC STATUS

This NQMC summary was completed by ECRI on July 18, 2003. The information was verified by the measure developer on August 29, 2003. This NQMC summary was updated by ECRI on June 16, 2006. The updated information was not verified by the measure developer.

COPYRIGHT STATEMENT

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For detailed specifications regarding the National Committee on Quality Assurance (NCQA) measures, refer to HEDIS Volume 2: Technical Specifications, available from the NCQA Web site at www.ncqa.org.

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